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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>29 May 2008</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-17 and 24-44</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-15,17,24-34 and 36-44</u> is/are rejected.

7)☒ Claim(s) <u>16 and 35</u> is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail. Date _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Response to Arguments

1.   Please note the examiner of record has changed. The current examiner was

previously aware of U.S. Patent No. 5,666,293 and U.S. Patent No. 5,247,364, which in

combination, teach the inventive concept for which patent protection is being sought.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 1-4, 6, 9-15, 17, 24-27, 29-34, 36-38, 41, and 42 are rejected under 35

U.S.C. 103(a) as being unpatentable over Metz et al. (5,666,293) [Metz] in view of

Banker et al. (5,247,364) [Banker].

            Regarding claims 1, 24, 27, and 36, Metz discloses a set-top terminal for

connecting a subscriber to a cable network (fig. 1, set-top 100), said terminal

comprising:

            a processor (fig. 6, micro-processor 110); and

            a memory unit (fig. 6, system memory 120),

            wherein said processor only accepts downloads on a specified in-band

channel (channel 0, col. 8, lines 26-40) and records said download in said

memory unit (col. 9 line 65 - col. 10 line 12 and col. 37 line 60 - col. 38 line 52)

when one or more predetermined criteria are satisfied, and wherein said criteria

when satisfied indicates that acceptance of said download will cause a minimum

of interference with said subscriber's use of said set-top terminal (upgrade occurs

during a power down state or at the behest of the user, col. 9, lines 20-38 and

col. 35, lines 5-29); and

terminating execution of existing programming and commencing execution

of said upgraded programming only when the predetermined criteria are satisfied

(col. 9 line 65 - col. 10 line 12 and col. 38, lines 6-38).

Metz fails to disclose the processor monitors an out-of-band control

channel of the cable network for information indicating that a download of data or

programming is available and indicating a specified in-band channel for receiving

the download of data or programming offered to said set-top terminal over said

cable network.

In an analogous art, Banker discloses a cable network system for

transmitting messages to set-top terminals wherein a set-top terminal processor

monitors an out-of-band control channel of the cable network for information

indicating that a download of data is available and indicating a specified in-band

channel for receiving the download of data or programming offered to said set-

top terminal over said cable network (messages, which are received via a

dedicated out of band channel, col. 2, lines 55-68, control the set-top to

automatically tune to a specified in-band channel to receive data which is

addressed to the terminal, col. 8, lines 10-47), allowing a set-top to be alerted to

available data regardless of which channel the set-top is tuned to (col. 2, lines 55-68).

It would have been obvious at the time to a person of ordinary skill in the art to modify the set-top terminal of Metz to include monitoring an out-of-band control channel of the cable network for information indicating that a download of data or programming is available and indicating a specified in-band channel for receiving the download of data or programming offered to said set-top terminal over said cable network, as taught by Banker.

The system proposed by Metz suffers from a serious drawback in the form of relying upon a fixed channel for data downloads (namely, channel 0, col. 8, lines 26-32), which must be periodically monitored by the set top (either automatically or manually, col. 9, line 20-30), just to see if an update or application is even available (col. 9, lines 56-64). Further, this limitation becomes pronounced once the proliferation of software versions and number of applications available for download increases due to the number of supported service providers (col. 8, lines 41-64; col. 20, lines 32-42; col. 24, lines 50-63; and col. 35, lines 54-65), which would drastically increase the amount of time that the fixed channel must be monitored and tuned to in order to receive specified data (col. 37, lines 36-43). Therefore, the targeted messaging method proposed by Banker would provide an immediate benefit to the system disclosed by Metz by removing the need to dedicate a single in-band channel exclusively to a data carousel of indeterminate size and only requiring the set-top to check the in-band

channel when data is actually available, regardless of which channel the set-top

is tuned to.

Regarding claims 2 and 25, Metz and Banker disclose the set-top terminal

of claims 1 and 24, wherein the criteria are downloaded to said set-top terminal

over said cable network (Metz teaches the criteria are part of the operating

system, col. 8, lines 9-25, which is downloaded to the set-top, col. 8, lines 33-40).

Regarding claims 3 and 26, Metz and Banker disclose the set-top terminal

of claims 1 and 24, wherein the set-top terminal verifies that said data or

programming offered as said download is not already resident in said memory

(Metz, col. 9, lines 56-64).

Regarding claim 4, Metz and Banker disclose the set-top terminal of claim

1, wherein said set-top terminal verifies that said data or programming offered as

said download is specified as being intended for a class of terminals to which

said set-top belongs (Metz teaches the type of set-top is also a consideration,

col. 8, lines 41-45; col. 9, lines 56-64; and col. 36, lines 17-41).

Regarding claims 6, 29, and 37, Metz and Banker disclose the set-top

terminal of claims 1, 27, and 36, wherein said criteria include whether said set-

top terminal is turned off (Metz, col. 9, lines 20-30)

Regarding claims 9 and 30, Metz and Banker disclose the set-top terminal of claims 1 and 24, wherein said set-top terminal signals said subscriber that said download is available and requests permission to accept said download, said one or more criteria including a positive response by said subscriber to said request for permission to accept said download (Metz discloses a menu option for initiating the download manually, col. 9, lines 20-30, wherein when modified in view of Banker, said menu option is a prompt to the user, Banker, col. 8, lines 10-47).

Regarding claims 10 and 31, Metz and Banker disclose the set-top terminal of claims 1 and 24, wherein said set-top terminal tunes to said specified in-band channel to receive said download if said one or more criteria are satisfied (Metz, col. 9, lines 20-30, wherein the satisfaction of the criteria initiates the download, which involves tuning to the specified channel, Banker, col. 8, lines 10-47).

Regarding claims 11 and 33, Metz and Banker disclose the set-top terminal of claims 1 and 24, wherein if said criteria are satisfied, said processor erases information in said memory unit and replaces said erased information with data from said download (Metz, col. 9 line 65 - col. 10 line 12 and col. 38, lines 6-38).

Regarding claim 12, Metz and Banker disclose the set-top terminal of claim 1, wherein following said download of programming, said processor will only execute newly-received programming from said download when one or more predetermined criteria are satisfied (Metz, col. 10, lines 9-12).

Regarding claims 13, 14, and 32, Metz and Banker disclose the set-top terminal of claims 1 and 24, wherein prior to accepting said download, said processor determines whether any programming is stored in said memory which is not being executed, but which is identified as being a later version than programming being executed by said processor at that time, if said processor locates any such later version of programming in memory, said processor will terminate execution of the programming being executed, erase said terminated programming from memory and reset so as to execute said later version of said programming (Metz, col. 38, lines 6-19).

Regarding claims 15, 17, and 34, Metz and Banker disclose the set-top terminal of claims 1 and 24, wherein said memory unit is logically partitioned into two sections, a first section for containing programming being executed by said processor and a second section for receiving and storing programming from said download (Metz uses RAM for receiving programming from said download and

NVRAM for containing programming being executed, which are both logically and

physically separate, col. 38, lines 39-52).

Regarding claim 38, Metz and Banker disclose the method of claim 36, but

fail to disclose the criteria include detection of a commercial break in television

programming being received by said set-top terminal.

Examiner takes official notice that many technologies exists which server

to detect commercials, as viewers are often uninterested in such and often

consider them an annoyance. These technologies are used in conjunction with

some form of commercial blocking method, such as muting the commercial or

stopping the recording of a programming to eliminate the commercial from the

program, as such it is notoriously well known that viewers are often uninterested

in commercial breaks and are not paying much attention when they occur.

Therefore, it would have been obvious at the time to a person of ordinary

skill in the art to modify the method of Metz and Banker to include detection of a

commercial break in television programming being received by said set-top

terminal, as interrupting a commercial to download programming would likely

have little impact on the interest of a viewer, who sees the commercial itself as

an interruption of the broadcast programming.

Regarding claim 41, Metz discloses a set-top terminal for connecting a

subscriber to a cable network (fig. 1, set-top 100), said terminal comprising:

a processor unit comprising a first processor (fig. 6, digital A/V processor 125) and a second processor (fig. 6, micro-processor 110); and

a memory unit (fig. 6, system memory 120);

wherein said first processor is dedicated to providing a user interface (digital A/V processor 125 includes the graphics overlay control which provides non-broadcast user services, such as on screen displays and menus, col. 18, lines 45-67 and) and said second processor is dedicated to managing a download of data or programming offered to said set-top terminal over said cable network through a specified in-band channel (col. 30, lines 15-34) such that said first processor can maintain said user interface including user services while said second processor manages the download (the microprocessor performs the download while the graphics overlay control provides an on screen graphic for display, col. 38 line 62 - col. 39 line 6).

Metz fails to disclose monitoring an out-of-band channel for information indicating that a download of data or programming is available, indicating a specified in-band channel for receiving the download.

In an analogous art, Banker discloses a cable network system for transmitting messages to set-top terminals wherein a set-top terminal processor monitors an out-of-band control channel of the cable network for information indicating that a download of data is available and indicating a specified in-band channel for receiving the download of data or programming offered to said set-top terminal over said cable network (messages, which are received via a

dedicated out of band channel, col. 2, lines 55-68, control the set-top to automatically tune to a specified in-band channel to receive data which is addressed to the terminal, col. 8, lines 10-47), allowing a set-top to be alerted to available data regardless of which channel the set-top is tuned to (col. 2, lines 55-68).

It would have been obvious at the time to a person of ordinary skill in the art to modify the set-top terminal of Metz to include monitoring an out-of-band control channel of the cable network for information indicating that a download of data or programming is available and indicating a specified in-band channel for receiving the download of data or programming offered to said set-top terminal over said cable network, as taught by Banker.

The system proposed by Metz suffers from a serious drawback in the form of relying upon a fixed channel for data downloads (namely, channel 0, col. 8, lines 26-32), which must be periodically monitored by the set top (either automatically or manually, col. 9, line 20-30), just to see if an update or application is even available (col. 9, lines 56-64). Further, this limitation becomes pronounced once the proliferation of software versions and number of applications available for download increases due to the number of supported service providers (col. 8, lines 41-64; col. 20, lines 32-42; and col. 24, lines 50-63), which would drastically increase the amount of time that the fixed channel must be monitored and tuned to in order to receive specified data (col. 37, lines 36-43). Therefore, the targeted messaging method proposed by Banker would

provide an immediate benefit to the system disclosed by Metz by removing the

need to dedicate a single in-band channel exclusively to a data carousel of

indeterminate size and only requiring the set-top to check the in-band channel

when data is available, regardless of which channel the set-top is tuned

to.

Regarding claim 42, Metz and Banker disclose the set top terminal of

claim 1, wherein said programming is received in packets, said terminal being

configured reassemble said packets into an executable object stored into non-

volatile memory (Metz, col. 10, lines 25-46 and col. 16, lines 17-30).

4.   Claims 5 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Metz and Banker as applied to claims 1 and 27 above, and further in view of Diehl et al.

(5,373,557, of record) [Diehl].

Regarding claims 5 and 28, Metz and Banker disclose the set-top terminal

of claims 1 and 27, but fail to disclose the criteria include a time of day.

In an analogous art, Diehl teaches informing a receiver of time of day

limitations within which to access update data, taking advantage of off-peak

hours to perform automated downloading of data (col. 1 line 50 - col. 2 line 17).

It would have been obvious at the time to a person of ordinary skill in the

art to modify the set-top terminal of Metz and Banker to include informing a

receiver of time of day limitations within which to access update data, taking

advantage of off-peak hours to perform automated downloading of data, as
taught by Diehl, as off-peak hours are when a user is least likely to be disturbed
by the interruption.

5.   Claims 7, 8, 39, and 40 are rejected under 35 U.S.C. 103(a) as being
unpatentable over Metz and Banker as applied to claim 1 above, and further in view of
Bisdikian et al. (6,047,317) [Bisdikian].

        Regarding claims 7 and 39, Metz and Banker disclose the set-top terminal
of claims 1 and 36, but fail to disclose said one or more criteria include a
deadline by which acceptance of said download is required by an operator of
said cable network, said deadline being a specific point in time subsequent to an
initial offering of said download of data or programming.

        In an analogous art, Bisdikian discloses a data carousel wherein the
receiver is provided with information which specifies a deadline for accepting
information from the carousel, said deadline being a specific point in time
subsequent to an initial offering of said download of data or programming (a
receiver accesses a directory for a data carousel which indicates the content and
position of data within the carousel, and if a receiver does not accept the data on
its first pass, the deadline is missed and the receiver must wait until the data is
rebroadcast in the carousel before being able to access it again, col. 3, lines 55-
63).

It would have been obvious at the time to a person of ordinary skill in the art to modify the set-top terminal of Metz and Banker to include a deadline by which acceptance of said download is required by an operator of said cable network, said deadline being a specific point in time subsequent to an initial offering of said download of data or programming, as taught by Bisdikian. The purpose of said modification would further improve on the benefit to Metz that Banker suggests to one of ordinary skill in the art. Since Banker teaches alerting the set-top that data is available and on which channel, alleviating the need to constantly monitor a data channel, adding deadline information which indicates when the data will be available further reduces the time needed to download data from the carousel, as the set-top would then only tune to the specified channel at the specified time rather than tuning to the specified channel and waiting for the data to arrive.

Regarding claims 8 and 40, Metz, Banker, and Bisdikian disclose the set-top terminal of claims 7 and 39, wherein said set-top terminal defers said deadline if said set-top terminal is being used to provide a dedicated service including recording programming in conjunction with a video cassette recorder or providing pay-per-view programming (this is an inherent feature of the combination, because Metz teaches the download only takes place when the user either explicitly initiates the download or when the set-top unit is powered off, col. 9, lines 20-30, thus if the set-top is in use, the set-top will defer the

deadline [the time at which the data is available on the carousel] until the set-top

is no longer in use).

6.   Claims 43 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Metz in view of Banker and Bisdikian.

        Regarding claim 43, Metz discloses a set-top terminal for connecting a

subscriber to a cable network (fig. 1, set-top 100), said terminal comprising:

        a processor (fig. 6, micro-processor 110); and

        a memory unit (fig. 6, system memory 120),

        wherein said processor downloads data on a specified channel (channel

0, col. 8, lines 26-40) and records said download in said memory unit (col. 9 line

65 - col. 10 line 12 and col. 37 line 60 - col. 38 line 52) when one or more

predetermined criteria are satisfied, and wherein said criteria when satisfied

indicates that acceptance of said download will cause a minimum of interference

with said subscriber's use of said set-top terminal (upgrade occurs during a

power down state or at the behest of the user, col. 9, lines 20-38 and col. 35,

lines 5-29).

        Metz fails to disclose the processor monitors transmission over the cable

network for information indicating that a download of data or programming is

available and indicating a specified channel for receiving the download of data or

programming offered to said set-top terminal over said cable network, and

wherein said one or more criteria include a deadline by which acceptance of said

download is required by an operator of said cable network, said deadline being a specific point in time subsequent to an initial offering of said download of data or programming.

In an analogous art, Banker discloses a cable network system for transmitting messages to set-top terminals wherein a set-top terminal processor monitors an out-of-band control channel of the cable network for information indicating that a download of data is available and indicating a specified in-band channel for receiving the download of data or programming offered to said set-top terminal over said cable network (messages, which are received via a dedicated out of band channel, col. 2, lines 55-68, control the set-top to automatically tune to a specified in-band channel to receive data which is addressed to the terminal, col. 8, lines 10-47), allowing a set-top to be alerted to available data regardless of which channel the set-top is tuned to (col. 2, lines 55-68).

It would have been obvious at the time to a person of ordinary skill in the art to modify the set-top terminal of Metz to include monitoring the cable network for information indicating that a download of data or programming is available and indicating a specified channel for receiving the download of data or programming offered to said set-top terminal over said cable network, as taught by Banker.

The system proposed by Metz suffers from a serious drawback in the form of relying upon a fixed channel for data downloads (namely, channel 0, col. 8,

lines 26-32), which must be periodically monitored by the set top (either

automatically or manually, col. 9, line 20-30), just to see if an update or

application is even available (col. 9, lines 56-64). Further, this limitation becomes

pronounced once the proliferation of software versions and number of

applications available for download increases due to the number of supported

service providers (col. 8, lines 41-64; col. 20, lines 32-42; col. 24, lines 50-63;

and col. 35, lines 54-65), which would drastically increase the amount of time that

the fixed channel must be monitored and tuned to in order to receive specified

data (col. 37, lines 36-43). Therefore, the targeted messaging method proposed

by Banker would provide an immediate benefit to the system disclosed by Metz

by removing the need to dedicate a single in-band channel exclusively to a data

carousel of indeterminate size and only requiring the set-top to check the in-band

channel when data is actually available, regardless of which channel the set-top

is tuned to.

        Metz and Banker fail to disclose wherein said one or more criteria include

a deadline by which acceptance of said download is required by an operator of

said cable network, said deadline being a specific point in time subsequent to an

initial offering of said download of data or programming.

        In an analogous art, Bisdikian discloses a data carousel wherein the

receiver is provided with information which specifies a deadline for accepting

information from the carousel, said deadline being a specific point in time

subsequent to an initial offering of said download of data or programming (a

receiver accesses a directory for a data carousel which indicates the content and position of data within the carousel, and if a receiver does not accept the data on its first pass, the deadline is missed and the receiver must wait until the data is rebroadcast in the carousel before being able to access it again, col. 3, lines 55-63).

It would have been obvious at the time to a person of ordinary skill in the art to modify the set-top terminal of Metz and Banker to include a deadline by which acceptance of said download is required by an operator of said cable network, said deadline being a specific point in time subsequent to an initial offering of said download of data or programming, as taught by Bisdikian. The purpose of said modification would further improve on the benefit to Metz that Banker suggests to one of ordinary skill in the art. Since Banker teaches alerting the set-top that data is available and on which channel, alleviating the need to constantly monitor a data channel, adding deadline information which indicates when the data will be available further reduces the time needed to download data from the carousel, as the set-top would then only tune to the specified channel at the specified time rather than tuning to the specified channel and waiting for the data to arrive.

Regarding claim 44, Metz, Banker, and Bisdikian disclose the set-top terminal of claim 43, wherein said set-top terminal defers said deadline if said set-top terminal is being used to provide a dedicated service including recording

programming in conjunction with a video cassette recorder or providing pay-per-view programming (this is an inherent feature of the combination, because Metz teaches the download only takes place when the user either explicitly initiates the download or when the set-top unit is powered off, col. 9, lines 20-30, thus if the set-top is in use, the set-top will defer the deadline [the time at which the data is available on the carousel] until the set-top is no longer in use).

Allowable Subject Matter

7.   Claims 16 and 35 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DOMINIC D. SALTARELLI whose telephone number is (571)272-7302. The examiner can normally be reached on Monday - Friday 9:00am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dominic D Saltarelli/
Examiner, Art Unit 2623

/Mark Powell/
Director
Technology Center 2600